

Chest drain removal practices in post-operative cardiac patients in paediatric critical care units (PCCU) across United Kingdom (UK)

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Introduction:

Chest Drains (CD) are important part of post-op care following paediatric cardiac surgery however the decision making about CD removal, pain assessment and management are variable leading to suboptimal care. Although there is some data on adults, there is insufficient information on paediatric practice in this field.

Objectives:

To describe the CD removal practices in post-operative cardiac patients in the PCCUs across UK, especially in relation to analgesia, decision making and post CD removal chest X-ray (CXR).

Methods:

A cross-sectional questionnaire survey was sent electronically using Survey Monkey to consultants in all the cardiac PCCUs across UK to get a snapshot of practices in their institutions.

Results:

- The response rate was 90%
- 70% units had a departmental guideline on CD removal
- Decision about CD removal was either solely made by cardiothoracic surgeons (40%) or both PCCU consultants & cardiothoracic surgeons (60%)
- CD was removed by nurses in 80% of the units whereas 10% were removed by PICU doctors and 10% by cardiothoracic surgeons.
- 90% of the units routinely did a CXR post CD removal
- None of the units had a procedural pain score in place for CD removal
- The types of analgesia used by various units included
 - Nothing extra 10%
 - Morphine bolus 40%
 - Ketamine 10%
 - Propofol 10%
 - Combination of Morphine/entonox/propofol/ketamine or topical agents depending on ventilation status 30%
- The observation period following CD removal was variable ranging from 1-4 hours.

Limitations:

Although our response rate was high, this survey has all the inherent limitations related to survey design, small sample size, including only physicians' views.

Conclusions:

The survey highlights the variability of CD removal practices in PCCUs across the UK. There is need for reflection on the current practice to remove unwarranted variance and planning further studies in this area with focus on pain assessment/management, patient/parent satisfaction and cost-effectiveness.